STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENTAL CONTROL
DIVISION OF AIR & WASTE MANAGEMENT
89 KINGS HIGHWAY
P.O. BOX 1401
DOVER, DELAWARE 19903

WASTE MANAGEMENT SECTION

TELEPHONE: (302) 736-4781

May 28, 1987

Mr. Lee J. Beetschen
CABE Associates, Inc.
P.O. Box 877
Dover, DE 19903-0877

Dear Mr. Beetschen:

Thank you for your diligence and fine report on the ground water contaminant recovery project at Chem-Solv, Inc. in Cheswold, Delaware. We will be holding a public meeting in the first half of June for residents in the area. CABE's report conclusions and recommendations will be presented at that meeting.

We have been moving on some of the recommendations already. Actions include:

1. Replacement of the benzene-contaminated well at the Gearhart rental property--double-cased well screened in the Cheswold Aquifer is completed and serving uncontaminated water at the rental property. The well has the capacity to serve other properties if contamination occurs in other local wells.

2. Destruction of the old contaminated, 40-foot deep well on the Gearhart property--the casing was removed and the hole grouted with cement to prevent the possibility of vertical leakage of contaminants.

3. Prospecting for immiscible product on top the locally extensive 20-foot deep silty clay--several piezometers will be installed in the spill area (hopefully) this week.

4. Investigation of the possible gasoline contamination (the likely source of benzene in the 40-foot Gearhart well) on the property immediately north of Chem-Solv (formerly Pee Wee's Trade Stop)--installation of several piezometers was proposed, but property owner is hostile (we'll need to go the formal route with him).

I will get you an announcement of the date, time and place of the public meeting as soon as it is set. I am trying to get another round of water levels and ground water quality samples this week. We will likely be soliciting assistance on operation and maintenance of the contaminant-recovery system at Chem-Solv as soon as the other work information described above is completed and evaluated. I will be back to you on this matter.

Sincerely,

Michael A. Apgar, P.G.

MAA:ims
MAA87002

cc: F. Tucker Moorshead, Earth Data, Inc.
Phillip G. Retallick
Gary A. Molchan

AR100826

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MEMORANDUM

TO: Phil Cherry

FROM: Mike Apgar MA

SUBJECT: Abandonment of Contaminated Well on Gearhart (Shane) Rental Property

DATE: May 28, 1987

Phil Sharp completed and hooked up the replacement for the above-referenced well Friday, 5/15/87. The subject contaminated 40-foot deep well was constructed in 1985 by John Fuhr. The major contaminant was benzene and the source is most likely an abandoned gas station (formerly Pee Wee's Truck Stop) on the opposite (west) side of U.S. Route 13.

This well was the only one significantly contaminated which is screened beneath the 20-foot site that is locally extensive in the Chem-Solv area. I have been concerned that the well itself caused or contributed to organic contaminants reaching the lower part of the Columbia Formation. The contaminated well was jetted in and not grouted. The well annulus was likely left open, allowing contaminated water above the 20-foot silty clay to migrate downward (under one-foot head difference) to the coarse sand beneath the silty clay.

I determined that the only way to be sure to eliminate the possibility of contamination was to remove the well casing and cement grout the remaining hole. Consequently, I asked Phil Sharp to lift out the well casing with his backhole bucket. Even though the two-inch diameter casing had been in the ground for two years--and had five couplings in a total depth of forty feet--it came right out. Obviously, the well annulus was not properly sealed!

The hole created by pulling the casing stayed open and we were about to grout it entirely with cement. The cement was poured into the hole and surged into place with a twenty-foot long, one-inch diameter plunger. We got a very good seal of the borehole and eliminated it as a possible avenue of vertical contaminant migration.

AR100827

Because this well problem could have been avoided (we knew and warned the owner of this, see the attached letter), I recommend that any future wells permitted in areas of suspected contamination be required to be installed only by methods in which the well annulus can be completely sealed. Jetting--at least as performed by this contractor-- will not be adequate for this purpose.

MAA:ims
MAA87003

cc: Gary A. Molchan

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MEMORANDUM

To: Phillip G. Retallick

Thru: Gary A. Molchan

From: Michael A. Apgar

Subject: Public Water in Cheswold to eliminate the threat of Chem-Solv contaminants to local domestic wells.

Date: July 22, 1987

On June 18, 1987, we conducted a public meeting with residents of the Cheswold area to explain possible remedies to the residual contaminants in groundwater on and off the Chem-Solv site. We expressed preference for extension of a public water system in Cheswold to the area along Rt. 42 east of Rt. 13 (which is downgradient to the Chem-Solv site). This area is now threatened by solvent and/or petroleum residuals which are up to 100 times higher than recently adopted maximum contaminant levels for public drinking water. The public water system extension would be an alternative to cleaning up the remaining ground water contaminants (which pose no significant threat to other aquifers or the environment) to the MCLS for public drinking water.

The cost of a water system pump, pressure tank, distribution system, meters, etc. was estimated at approximately $600,000 in 1982. Applying an annual 10% inflation factor would make the current total system cost approximately $1,000,000. Opportunity for funding from Farm Home Administration and the Community Development Block Grant Program reportedly could provide all but 5% of the total. DNREC and local funding could cover this final increment and make the water system possible. This would be a major benefit to the community - many of whose citizens have quality/quantity problems with individual wells - and would improve prospects for development of additional housing and industry.

The citizens at the June 18th meeting reacted favorably to our preferred alternative. We agreed to pursue funding opportunities to accomplish the extension of public water.

AR100829

On July 13, I met with Doug Croft (Delaware Development Office, Manager of the Community Development Block Grant Program), Jim Waters (Farm Home Administration, Manager of FMHA Grant and Loan Programs), Mike Thompson (Director, kent County Development Office), and Phil Cherry (DWR, Supervisor of Water Supply Branch)..

It appears that FMHA may be able to fund 55% - and possibly 75% - of development of a water system for Cheswold. However, a salary survey would have to be conducted to determine whether the community meets grant eligibility requirements (80% of the median rural income for the area). Mike Thompson agreed to help Dorothy Demsey (Mayor of Cheswold) obtain funding for a professional pollster to do this.

A Community Development Block Grant could fund all but 10% of the balance of the system costs or (Although some rules will need to be modified to allow more than the current limitation to a 50% share of a new water system and raise the $200,000/year ceiling for projects or allow multiple year funding on the same project). However, the Development Office is adamant on having at least a 10% local fund share on projects financed by CDBG. They would not consider State CIP monies - the source of Chem-Solv remedial expenditures - to count towards the local share.

Cheswold is unwilling and/or unable to assume the substantial debt involved in this project. (A 10% share of the total estimated cost would be $100,000). Nevertheless, a developer who recently purchased both a large planned housing tract and the industrial park in Cheswold, has expressed interest in providing some of the local share cost to get a public water system.

The pre-application for FmHA Grant Assistance must be submitted in September (1987). I explained the foregoing to Dorothy Demsey who reiterated Cheswold's aversion to assuming any substantial debt. However, she agreed to contact Mike Thompson to get the salary survey done.

At this point, DNREC would be providing moral support for the development of public water in Cheswold as a solution to the Chem-Solv pollution problem and other threats to the shallow aquifer. We may fund a token amount of water system extension costs to Route 13 and would fund the extension (beyond the Town limits) under Rt. 13 and along Rt. 42. This later is estimated at roundly $50,000.

P.S. - If by fall it appears that eligibility for or unavailability of grant funds will prevent the development of public water in Cheswold for the foreseeable future, I recommend that we proceed to negotiate development of a satellite public water system east of Bishops Corner (Rt. 13/Rt. 42 intersection) with Tidewater Utilities, Inc. (Tidewater is an investor-owned utility which currently holds a Certificate of Public Convenience and Necessity to serve this area, but has not yet provided such services). Such a system

could be supplied by a 6 or 8 inch diameter (double-cased) well in the Cheswold Aquifer. It could probably be installed for approximately $50,000 and be extended to serve future water users at their expense. Since we made public commitments to extensions of a Cheswold municipal system, we'd best play that option out first and only pursue the Tidewater route if the Cheswold option won't fly in the foreseeable future.

MAA:dc

cc: Philip J. Cherry
Joseph. J Hardman
John T. Barndt